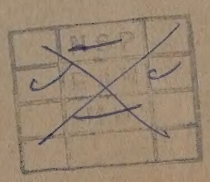
Ref 7/D
Meeting Report
PL: 1967/M/4

REPORT OF THE

SIXTH SESSION OF THE PLANT PROTECTION COMMITTEE FOR THE SOUTHEAST ASIA AND PACIFIC REGION

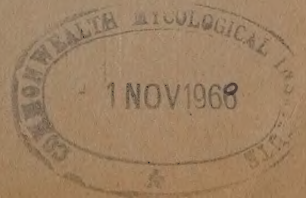
Held in Kuala Lumpur, Malaysia
March-April 1967

Q 16.2978
Q 16.1887



16.2978
Cover.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS



Meeting Report
PL:1967/M/4

REPORT OF THE
SIXTH SESSION OF THE PLANT PROTECTION COMMITTEE
FOR THE SOUTHEAST ASIA AND PACIFIC REGION

Held in Kuala Lumpur, Malaysia

March - April 1967

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Roma, 1967

CONTENTS

		Page
I.	INTRODUCTION	1
II.	PARTICIPATION AND ORGANIZATION	3
III.	PRESENT STATUS OF THE PLANT PROTECTION AGREEMENT	9
IV.	PLANT QUARANTINE ACTIVITIES IN THE REGION	10
	A. Australia	10
	B. Ceylon	10
	C. India	10
	D. Indonesia	11
	E. Japan	11
	F. Laos	11
	G. Malaysia	11
	H. Pakistan	12
	I. Philippines	13
	J. South Pacific Commission	13
	K. Thailand	14
	L. United Kingdom	14
	M. Vietnam	14
V.	REPORT OF THE STANDING TECHNICAL SUB-COMMITTEE	16
VI.	EXTENSION OF THE GEOGRAPNICAL SCOPE OF THE PLANT PROTECTION AGREEMENT	17
VII.	CONSIDERATION OF APPENDIX A OF THE AGREEMENT	17
VIII.	MEASURES FOR REGULATING IMPORTATION AND MOVEMENT OF PLANTS	18
	A.. Breadfruit	18
	B. Citrus	18
	C. Cocoa	19
	D. Coconut	20
	E. Forest trees	21
	F. Fruits and vegetables	21
	G. Oil Palm	21
	H. Ornamentals	21
	I. Rice	22
	J. Rubber	22
IX.	SPECIAL PLANT PEST AND DISEASE PROBLEMS WITHIN THE REGION	23
	1. Insect Pests and Diseases of Rice	23
	2. Plant Parasitic Nematodes	23
	3. Noxious Weeds and their Control	23
	4. Control of Rodents	24
X.	SPECIAL PROBLEMS IN PLANT QUARANTINE	25
	1. Inspection and Treatment of Aircraft and Vessels	25
	2. Inspection and Treatment of Plants and Plant Products	25

Page

3. Postentry Plant Quarantine Stations 26
4. Public Relations and Informative Programs 26

XI. TRAINING AND INVESTIGATION 27

1. Research, Training and Extension 27
2. Plant Quarantine Course in Australia 27

XII. LOSSES CAUSED BY PLANT PESTS AND DISEASES WITHIN THE REGION 28

XIII. PROGRAM OF THE COMMITTEE 28

1. Program 28
2. Officers 29
3. Next Session 29

XIV. GENERAL RECOMMENDATIONS 30

1. Extension of Region 30
2. Implementation of the Agreement 30
3. Staff..... 30
4. Intensification of Research, Training and Demonstration in Plant Protection in South East Asia and the Pacific 31
5. Training Courses 31

APPENDIX I

Agenda 32

APPENDIX II

List of Destructive Pests and Diseases not yet Established in the South East Asia and Pacific Region (Appendix A of the Agreement), as amended by the First, Second, Third and Sixth Meetings of the Committee 34

I. INTRODUCTION

The Plant Protection Committee for the South East Asia and Pacific Region was set up under the terms of Article II of the regional Plant Protection Agreement, which came into force on 2 July 1956. The First Session of the Committee was held in December 1956, in Bangkok, Thailand. The Committee, which consists of representatives of participating governments, acts as an advisory body to these governments - which now number fourteen - on matters relating to the Agreement, and considers and makes recommendations on plant protection problems requiring regional cooperation.

The Sixth Session of the Committee was held in Kuala Lumpur, Malaysia, from 27 March to 3 April 1967. The Session was attended by the representatives of ten participating governments, as well as by observers from four other governments and from the South Pacific Commission. Seven general meetings and nine sub-committee meetings were held. In all, twenty-six delegates and thirteen observers participated, and ninety-four papers were presented.

Visits were arranged to the Sungai Buloh Experimental Station and the Kuala Lumpur Laboratories of the Rubber Research Institute, Malaya. The participants also visited the National Operations Room of the Ministry of National and Rural Development and the Showrooms of the Council of Trust for the Indigenous People (MARA). Excursions were also arranged to see the Federal Experimental Station, Serdang, and the Oil Palm Research Station, Banting, and the Sungei Besi Tin Mine.

At the opening ceremony, the former Chairman, Dr. T.H. Harrison, welcomed the participants and expressed gratitude to the Government of Malaysia for acting as host to the Session. He emphasized the great advances already achieved in regional cooperation in the field of plant protection, and indicated that still much more remained to be done to fulfil the obligations of the Agreement and to meet the needs of increasing food production in the Region. He stressed the economic wisdom of strengthening plant quarantine and plant protection, and quoted the case of the codling moth of apples and pears in Australia. This insect, which was introduced into Australia during the last century before plant quarantine laws were enacted, is now costing the nation the equivalent of approximately 6 million Malaysian dollars per annum for its control.

In welcoming the delegates and observers on behalf of the Director-General of FAO, Mr. Ahsan-ud-Din, the Regional Representative for Asia and the Far East thanked the Government of Malaysia for its hospitality. He pointed out that the important role of international cooperation in the effective functioning of plant protection operations had long been recognized by FAO. As a result of the Committee's activities, quarantine legislation had been improved in many territories in the Region; better knowledge and understanding of plant pests and diseases already present in the Region had been gained and an information service had been set up to ensure that the governments were kept aware of outbreaks and movements of pests and diseases both within and outside the Region. Mention was made of the growing concern due to the enormous losses to crops in the field and crop produce in storage by plant pests, diseases, weeds, and rodents. This avoidable loss could be prevented or greatly minimized by regional and international cooperation. It was confidently felt that the present Session would make a valuable contribution to this end. Mr. Ahsan-ud-Din assured the Committee that every effort would be made by FAO to implement any recommendations put forward.

The Honorable Tuan Haji Mohamed Ghazali bin Haji Jawi, Minister of Agriculture and Cooperatives, Malaysia, welcomed the participants to Kuala Lumpur. His Excellency stressed the need to protect agricultural crops from existing pests and diseases and to prevent the entry of new pests and diseases. Since agriculture is of primary importance within the Region, His Excellency urged that efforts, both at regional and international level, should be made to protect crops and other plants on which the economy of the Region depended. Although rubber was still an important crop in the agricultural economy of Malaysia, greater emphasis was being laid on agricultural diversification in order to produce more cereals, fruits and vegetables. The Minister asked the participants to give particular attention to the protection of crops from new and more virulent forms of pests and warned of the risks involved in the increasing air traffic, as well as in the exchange of plants and plant propagating materials within and outside the Region. The Minister concluded by assuring the Committee that Malaysia will continue to do all in its power to assist the Committee.

Dr. Kahn Jalavicharana of Thailand responded on behalf of the participants.

ACKNOWLEDGEMENTS

FAO gratefully acknowledges the courtesy extended by the government of Malaysia in acting as the host to the Sixth Session of the Committee in Kuala Lumpur. FAO also records its appreciation of the excellent arrangements made for the meeting and assistance provided by the Malaysian Secretariat consisting of the officers and staff of the Ministry of Agriculture and Cooperatives and the Department of Agriculture. In particular, mention must be made of the activities carried out by Mr. Syed Mahadzar Hussein (Liaison Officer), Mr. Yusoff Rahim, Mr. Mohamad Jamil, Mr. S.J. Navaratnam and the persons in-charge of documentation and transport.

II. PARTICIPATION AND ORGANIZATION

DELEGATIONS OF PARTICIPATING GOVERNMENTS

Australia

J.R. MORSCHEL	Assistant Director-General (Plant Quarantine) Department of Health Canberra, A.C.T.
A.W. CHARLES	Chief of Division of Plant Industry Department of Agriculture, Stock and Fisheries Port Moresby Papua

Ceylon

D.V.W. ABEYGUNAWARDENA	Plant Pathologist Department of Agriculture Peradeniya

India

SARDAR SINGH	Plant Protection Adviser to the Government of India 4/19 Ajmeri Gate Extension New Delhi - 1

Laos

MAKHAM LIENGPHILAVANH	Chief of Agro-pedology and Phyto-pathology Laboratory Department of Agriculture Vientiane

Malaysia

MOHAMAD BIN JAMIL	Director of Agriculture West Malaysia Kuala Lumpur
VAN THEAN KEE	Assistant Director of Agriculture (Research) Department of Agriculture West Malaysia Kuala Lumpur

Malaysia (contd.)

AHMAD BIN YUNUS	Senior Entomologist Department of Agriculture West Malaysia Kuala Lumpur
ANI BIN AROPE	Senior Agronomist Department of Agriculture West Malaysia Kuala Lumpur
S.J. NAVARATNAM	Senior Plant Pathologist Department of Agriculture West Malaysia Kuala Lumpur
HO THIAN HUA	Entomologist Department of Agriculture West Malaysia Kuala Lumpur
K.G. SINGH	Plant Pathologist Department of Agriculture West Malaysia Kuala Lumpur
AHMAD NAWAWI	Plant Pathologist Department of Agriculture West Malaysia Kuala Lumpur
LIM GUAN SOON	Entomologist Department of Agriculture Parit Bwntar, Perak West Malaysia
T.H. WILLIAMS	Plant Pathologist Agricultural Research Centre Tuaran Sabah (East Malaysia)
G.J. TURNER	Plant Pathologist Department of Agriculture Kuching Sarawak (East Malaysia)
A. NEWSAM	Head, Pathological Division Rubber Research Institute of Malaya Kuala Lumpur
B.S. RAO	Entomologist Rubber Research Institute of Malaya Kuala Lumpur
TAY EONG BEOK	Entomologist Department of Agriculture Jesselton Sabah (East Malaysia)

Pakistan

HESHAMUL HUQUE	Joint Director Department of Locust Warning and Plant Quarantine Malin Halt Karachi 27

Philippines

H.A. CUSTODIO	Senior Entomologist Bureau of Plant Industry Manila

Thailand

KAHN JALAVICHARANA	Deputy Director-General of the Department of Agriculture Department of Agriculture Bangkok
PRAKOB KANJANASOON	Head, Plant Pathology Rice Protection Research Centre Rice Department Ministry of Agriculture Bangkok

United Kingdom

H.M.G. STEVENS	Third Secretary British High Commission Kuala Lumpur

Vietnam

DOAN MINH QUAN	Deputy Director of Rural Affairs Ministry of Agriculture 28 Mac Dinh Chi Saigon
NGO VAN QUYEN	Chief, Plant Protection Service Ministry of Agriculture P.O. Box 427 Saigon

OBSERVERS

Indonesia

M.S. HARAHAP	Head, Plant Quarantine Division Bureau of Foreign Relations Department of Agriculture Salemba 16 Djakarta

Indonesia (contd.)

VINCENTIUS HARDJITO	Senior Official Research Institute of the Sumatra Planters' Association c/o Rispa P.O. Box 104 Medan

Japan

SHUN YASUO	Chief, Plant Protection Section Ministry of Agriculture and Forestry Kusumigaseki, Chiyoda-Ku Tokyo
NAOHIRO KUMAGAI	Second Secretary Embassy of Japan AIA Building Kuala Lumpur

Laos

P.D. MANSER	Plant Protection Expert (FAO) U.N.D.P., B.P. 345 Vientiane

Malaysia

KOK LOKE TUCK	Agricultural Entomologist Faculty of Agriculture University of Malaya Kuala Lumpur
J.A. BULLOCK	Head, Ecology Unit Department of Zoology University of Malaya Kuala Lumpur
WONG TANG KA	Lecturer, College of Agriculture P.O. Box 203, Sungei Besi Selangor
YOONG SIEW CHEONG	Lecturer, College of Agriculture Serdang Selangor
LOW CHONG MOI	Research Assistant Forest Research Institute Kepong Selangor

Singapore

TAY MENG KUANG	Primary Production Officer Department of Primary Production Ministry of National Development Upper Pickering St. Singapore

United States of America

R. RUSSELL	Plant Protection Advisor - Vietnam USAID - Agriculture c/o American Embassy Saigon

South Pacific Commission

B.A. O'CONNOR	Plant Protection Officer South Pacific Commission P.O. Box 9 Noumea New Caledonia

FAO STAFF

AHSAN-UD-DIN	FAO Regional Representative for Asia and the Far East Bangkok Thailand
T.H. HARRISON	Consultant
D.B. REDDY	Regional Plant Protection Specialist FAO Regional Office for Asia and the Far East Bangkok Thailand
MICHEL CURTIS	Interpreter
B. YAKOVLEV	Interpreter

OFFICERS OF THE MEETING

Mr. Mohamad bin Jamil (Malaysia) was unanimously elected Chairman of the Committee in accordance with the Article II, 4 of the Regional Plant Protection Committee.

Dr. D.B. Reddy (FAO) served as Technical Secretary, and Dr. T.H. Harrison (Australia), the previous Chairman, as Consultant.

The Committee welcomed Dr. Reddy as the new Technical Secretary. Appreciation was recorded of the excellent work done by Mr. Anthony Johnston, Technical Secretary of the Committee from December 1958 until October 1965.

SUB-COMMITTEES

Two Technical Sub-Committees and a Drafting Sub-Committee were set up to serve during the period of the meeting, as follows:

Sub-Committee to consider Regulatory Measures and Special Problems in Plant Quarantine

J.R.G. Morschel (Australia), Chairman; D.V.W. Abeygunawardena (Ceylon); Ahmad bin Yunus (Malaysia); Ahmad Nawawi (Malaysia); Ani bin Arope (Malaysia); Heshamul Huque (Pakistan); Ho Thian Hua (Malaysia); Kok Loke Tuck (Malaysia); Lim Guan Soon (Malaysia); S. Navaratnam (Malaysia); P.D. Manser (Laos); A. Newsam (Malaysia); Ngo van Quyen (Vietnam); Prakob Kanjanasoon (Thailand); Raymond Russel (U.S.A.); K.G. Singh (Malaysia); Sripathi Rao (Malaysia); Tay Eong Beok (Malaysia); J.G. Turner (Malaysia); Wong Tang Ka (Malaysia); S. Yasuo (Japan); Yoong Siew Cheong (Malaysia).

Sub-Committee to consider Special Plant Protection Problems and Program of the Committee

Kahn Jalavicharana (Thailand), Chairman; J. Bullock (Malaysia); A.W. Charles (Australia); Makham Liengphilavanh (Laos); Sardar Singh (India); Van Thean Kee (Malaysia); T.H. Williams (Malaysia).

Drafting Sub-Committee

Mahamad bin Jamil (Malaysia), Chairman; A.W. Charles (Australia); H.A. Custodio (Philippines); Doan minh Quan (Vietnam); B.A. O'Connor (South Pacific Commission); M.S. Harahap and V. Hardjito (Indonesia); T.H. Harrison (F.A.O.); Kahn Jalavicharana (Thailand); Sardar Singh (India); H.M.G. Stevens (United Kingdom); Tay Meng Kuang (Singapore); S. Yasuo (Japan).

III. PRESENT STATUS OF THE PLANT PROTECTION AGREEMENT

The Committee received with gratification the report that Nepal had become a party to the Agreement, since the previous Session in 1964. The Status of the Agreement is now as follows:

STATUS OF THE PLANT PROTECTION AGREEMENT, April 1967

Country	Date of Signature	Date of Ratification	Date of Adherence
Australia	27 February 1956	Not required	
Ceylon	27 February 1956	Not required	
United Kingdom	29 March 1956	3 December 1956	
Laos	25 May 1956	17 March 1960	
*Indonesia	28 June 1956		
Portugal	2 July 1956	5 September 1957	
Viet-Nam	2 July 1956	Not required	
India	2 July 1956	Not required	
Thailand	-	-	26 November 1956
France	-	-	20 August 1957
Malaysia	-	-	20 November 1957
Pakistan	-	-	8 January 1958
Burma	-	-	4 November 1959
Philippines	-	-	11 June 1962
Nepal	-	-	5 August 1965

* Signature subject to ratification

IV. PLANT QUARANTINE ACTIVITIES IN THE REGION

Reports were presented to the Committee on plant quarantine activites since the last Session in December 1964.

A. AUSTRALIA

(a) Mainland

Legislation has been enacted to cover the movement of sugarcane from the East Coast to North West Australia, and the importation of grass and legume pasture plants of potential value in Tropical Australia.

The staff and the facilities for postentry quarantine have been further strengthened and in-service training is being expanded to make control of all imported plant material more effective.

(b) Territory of Papua and New Guinea

All the recommendations of the Committee have been implemented under broad administrative orders and regulations. These are backed by postentry quarantine facilities and rigorous inspection by qualified staff. Some planting material is grown in intermediate-quarantine in Australia. New schedules now being drafted will give specific legislative authority for full implementation of the recommendations of the Committee.

B. CEYLON

The Plant Protection Ordinance of Ceylon (1924) and subsequent amendments are rigidly operated. Certain amendments designed to bring the legislation in line with the recommendations of the Committee have been proposed and it is expected that the regulations will be issued shortly.

Proposals have been made for the establishment of a postentry quarantine station and for strengthening the staff engaged in plant quarantine work.

C. INDIA

Plant Quarantine Stations staffed by qualified personnel and with good inspection and treatment facilities have continued to operate at nine seaports, six airports and two land frontier stations, to control the importation of very large quantities of plant material. During the period reported, the following quantities of plants and plant materials were inspected and/or treated at the designated ports of entry: (1) seaports: 647,510,125 metric tons of plant products and 1,433,722 pieces plant propagating material; (2) airports: 652.93 metric tons of plant products and 995,598 pieces plant propagating material; and (3) land frontiers: 30,375,082 metric tons of plant products. Regulations under the Destructive Insects and Pests Acts (1914) are being amended to bring plant import restrictions in line with the Committee's recommendations and it is proposed to issue a revised comprehensive notification incorporating all amendments.

Domestic quarantines covering the export of potatoes from West Bengal to other parts of India because of black wart, and the movement of banana plants and plant materials from certain States because of mosaic disease and from others because of bunchy top disease, are being enforced.

D. INDONESIA

No change in the legislative provision covering Plant Quarantine has taken place but the need to regulate the movement of plants in accordance with Committee's recommendations is appreciated. Since November 1966 the Plant Quarantine Service has become a division of the Bureau of Foreign Relations of the Department of Agriculture. Proposals are being submitted for establishing new plant quarantine stations and for strengthening existing stations. An officer has been trained for seed testing work and a Seed Testing Station is also proposed.

A training course for plant quarantine inspectors is being organized for the second half of 1967.

E. JAPAN

A well organized Plant Quarantine Service operates through four main stations, seven branch stations and 34 sub-branch stations at the major seaports and airports.

The main stations at Yokohama, Nagoya, Kobe and Moji have fully equipped laboratory and postentry quarantine facilities. Over 300 well trained staff are engaged in plant quarantine work.

F. LAOS

Plant quarantine regulations have been enacted but the limited staff of the Plant Protection Section of the Department of Agriculture cannot implement them.

It is expected that a Plant Protection Laboratory will begin operations soon. Qualified staff e.g., entomologists and plant pathologists, are urgently needed for survey, identification and research work.

G. MALAYSIA

Under the First Malaysian Plan 1966-70, the Plant Quarantine Service proposes the following four regional quarantine centers in West Malaysia:

- a central office in Kuala Lumpur covering imports through Kuala Lumpur and Port Swettenham by air and sea respectively;
- a regional station in Johore Bahru to cover imports from Singapore;
- a regional station in Penang for imports by air and sea into Penang and by land from Thailand through Thai border stations; and
- a regional station in Kota Bahru for imports through the east coast of West Malaysia.

These regional stations will be manned by officers of graduate status. Adequate offices, laboratories and inspection facilities are available or will be provided.

Plants requiring quarantine or observation are grown in the Federal Agricultural Station in Kuala Lumpur or at the Plant Quarantine Station, Pulau Tekong in Singapore, where research entomologists and plant pathologists undertake detailed inspections. A recent importation of Hevea seeds from the American Tropics, after intermediate inspection and treatment in the United Kingdom, was grown in an insect-proof house of the Rubber Research Institute at Kuala Lumpur before being cleared.

Sabah has no specialized quarantine staff but plants imported through Jesselton and Sandakan are inspected by an authorized member of the Department of Agriculture. At Jesselton, which is the port of entry for scheduled plants, imported plants are inspected by a research pathologist and entomologist when considered necessary. A plant quarantine house was completed in 1966 at the Agricultural Research Station, Tuaran, to handle imported plant material.

In Sarawak there are five main ports of entry. As in Sabah, plant quarantine work is done by research staff. A plant quarantine station is proposed for Kuching.

It is hoped that the revised Rules under the Agricultural Pests and Noxious Plants Ordinance 1953, which will be uniform for the whole of Malaysia, will be introduced shortly.

H. PAKISTAN

A new set of Rules under the Destructive Insects and Pests Act, 1914 (11 of 1914), consolidating and superseding all previous Rules, was issued in Islamabad on 2 January 1967.

These new Rules prohibit the importation of all plants or plant material which may serve as carriers of diseases and plant pests destructive to agriculture or of noxious weeds, except under a valid permit issued prior to such importation by the Director or Quarantine Entomologist. All plant imports must enter through the prescribed ports or points of entry.

Prior advice of arrival of plants or plant materials must be given by the importer. He is also required to obtain an official phytosanitary certificate issued in the country of origin, or in other cases supporting documents, certifying that inspection and treatment as required have been done with adequate safeguards, should accompany the consignment.

Despite the existence of certificates covering the consignment, the Plant Quarantine Officer may inspect, and treat as deemed necessary.

The new Rules have given more powers to the Plant Quarantine Service and have, as far as possible, brought the regulations in line with the recommendations of the Committee.

Special regulations governing importation of cotton both for seed and for commercial use are detailed.

The importation of soil or any other unsterilized rooting media, such as compost, humus or forest litter capable of carrying pathogens is prohibited. Imported plants and plant material shall be free of sand, soil, sawdust or earth. All packing materials used in connection with plants are subject to examination and approval.

The importation of insects and other animal cultures and noxious weeds, even for scientific purposes, is strictly controlled.

Development of postentry quarantine facilities, including glass-houses, are planned for Karachi and Dacca. All imported plant material is strictly examined and every care taken to prevent the importation of pests and diseases from overseas.

The Plant Protection and Plant Quarantine Service now has eight Plant Quarantine Stations in West Pakistan and an equal number in East Pakistan. Fumigation facilities already exist in the main ports and are being made more efficient.

Special steps are being taken to prevent the introduction of weeds. Special refresher courses are being provided the existing staff, and personnel of a graduate status is being recruited. Two senior officers attended the plant quarantine course in Australia in 1966.

I. PHILIPPINES

The basic Plant Quarantine Law, Act 3027, has been reviewed and an amended Act is ready for submission to the Philippine Congress for approval. This will incorporate the recommendations made by the Committee.

Considerable progress has been made in nematological investigations. Nematologists have been employed to conduct surveys and make physiological and ecological studies.

Inspection of imported seeds and food grains is being carried out to determine the presence of weeds as contaminants. Steps to control noxious weeds already established are being taken.

To cope with increased international trade in ports throughout the Republic, increased staff have been allocated to plant quarantine work. Three officers were given special training in plant quarantine in Australia in 1966. New facilities such as permanent quarantine buildings, additional fumigation chambers and greenhouses in the main ports and sub-ports are proposed.

The Philippine Government is preparing a request to be presented to the UNDP(SF) for assistance in the establishment of a Regional Plant Quarantine Training Center and a Postentry Quarantine Station.

J. SOUTH PACIFIC COMMISSION

The South Pacific Commission has appointed a Plant Protection Officer who is preparing a simple manual on dangerous pests and diseases which are not yet established or widely distributed within the Region. He also serves in an advisory capacity on plant quarantine and plant introductory matters.

A technical meeting on plant protection is planned for July 1967 which will deal with aspects of plant quarantine and plant protection in the South Pacific Region.

A plant quarantine reporting service has been maintained and nine newsletters have been issued since the Fifth Session.

Training in plant quarantine procedures and techniques for plant quarantine personnel, mainly in-service, has been continued in the Region and at the East-West Centre, Honolulu, Hawaii. At the completion of the 4th course this year, about 45 Pacific Islanders will have received three months of intensive training in plant quarantine procedures and techniques.

Other officers have participated in a short training course on diseases of tropical crops and in biological principles under the Rhinoceros Beetle Project.

A publication dealing with rat control in the Pacific has been issued.

K. THAILAND

Many notifications, particularly those relating to the names of prohibited materials and considerations for exceptions, have been modified. The budget to expand the plant quarantine research laboratory has already been made available for the current year. One incinerator for the destruction of plant materials was constructed at the Bangkhen Agricultural Centre, Bangkok, which is the Headquarters for Plant Quarantine. Two vacuum fumigation chambers, each with a capacity of five cubic meters, will also be installed there. The postentry quarantine facilities at Bangkhen are now in use.

Seventeen international plant quarantine stations and one postentry plant quarantine station are in service. Two of them were established in December 1965; one in Pibulmangsahan and the other in Ubolrajthani Province, near the Laotian border. The number of plant quarantine officers has been increased to seventy-two, many of graduate status. Two of these officers received special training in Australia in 1966. A nematologist was added to the staff early in 1966 and a survey of nematodes in Thailand begun. One senior member of the staff is in the U.S.A. for postgraduate training.

Surveys for new stations have been undertaken and others are under consideration.

L. UNITED KINGDOM

A brief report on the new regulations covering Plant Importations in Fiji was given.

Plant quarantine services are being developed. Plant Quarantine staff regularly undergo training at the East-West Centre, Hawaii, and one senior officer received special training in Australia in 1966. Inspection and treatment of all overseas aircraft is regularly carried out and infected or infested material is treated or destroyed. Identification of pests and diseases is undertaken by the research staff who also advise on treatment procedures.

M. VIETNAM

Plant quarantine is implemented by the Plant Quarantine Bureau of the Plant Protection Service with headquarters in Saigon.

Importation of plants and plant products is regulated under Decrees No. 417 and 418 - CAB/SG/SE of June 1953. In general, inspection is required before release. Treatment or destruction as deemed appropriate may be ordered. Phytosanitary Certificates from the country of origin are required.

The importation of plants or parts thereof of rubber (*Hevea brasiliensis*), cotton (*Gossypium* spp.), *Hibiscus* spp. and other plants of the family Malvaceae, sugarcane (*Saccharum officinarum*), tea (*Thea sinensis*), fruits (all kinds), banana (*Musa* spp.), coffee (*Coffea* spp.), cocoa (*Theobroma cacao*), seeds (all kinds), etc., are regulated by special arrêtes or circulars. The importation of soil and related culture media is strictly prohibited.

The Plant Quarantine Bureau has offices in the Port Area, at the General Post Office, at Saigon Airport, at Da-Nang Port and in newly established commercial ports where inspectors are permanently assigned.

Thirty-four plant quarantine inspectors are regularly employed, all of whom have been given a special course in phytosanitary inspection.

The Bureau co-operates closely with research entomologists and plant pathologists of the Plant Protection Service. Active survey work on nematodes is in progress. Much attention is also being devoted to noxious weeds.

The postentry quarantine of introduced plants is carried out in the official quarantine station, as well as in designated official nurseries and private plantations.

Atmospheric fumigation chambers are in use and two vacuum fumigation chambers are to be built.

V. REPORT OF THE STANDING TECHNICAL SUB-COMMITTEE

The business of the Standing Technical Sub-Committee has, as before, been carried out mainly by correspondence. However, two Sub-Committee meetings were held during the period, the first in Bangkok on 2 September 1966, and the second immediately prior to the Sixth Session on 25 March 1967.

The Technical Secretary reported on the activities which had been carried out, based on the decisions and recommendations of the Committee at its Fifth Meeting and of the Sub-Committee at its Meeting in September 1966. These are summarized as follows:

(a) The information service was continued by the circulation of Quarterly Newsletters, Technical Documents, Information Letters and Lists of Pests and Diseases in the Region.

(b) Visits were made, either on request or for special purposes of gathering information, attending meetings, etc., to Australia, Ceylon, Hawaii, Indonesia, Japan, Malaysia, Nepal, Pakistan, Philippines, Samoa, Singapore and Taiwan.

(c) A paper was prepared on new records of pests and diseases in the Region and presented at this meeting.

(d) Recommended measures for regulating the importation and movement of plants were revised, including the amendments made at the Fifth Meeting, and were presented to the Committee.

(e) As recommended at the Fifth Meeting, a paper on plant quarantine procedures in the Region was prepared for the consideration of the Committee.

(f) Host lists of pests and diseases known to occur in the Region continued to be compiled and revision of the earlier lists was made. Crops covered in the lists included crucifers, cucurbits and mango. The list of plant nematodes in the Region was revised.

(g) Information on pests and diseases of forest trees, vegetables, fruits and ornamentals in the Region was compiled and presented to the Committee for consideration.

(h) A paper was prepared on training in plant protection and plant quarantine for presentation to the Committee.

(i) As recommended at the Fifth Meeting, a paper on public relations and informative programmes was prepared and presented to the Committee.

(j) A paper on inspection and treatment of plants and plant products has been prepared and was submitted to the Committee for consideration.

The Committee recorded its approval of the program of work carried out by the Technical Secretary, and of the way in which the Standing Technical Sub-Committee had assisted in defining his program and in giving guidance in the work.

It was recognized that by meeting in the periods between Committee meetings, the Standing Technical Sub-Committee had performed a very useful function in furthering the work of the Committee. The Committee, therefore, recommended that meetings of the Standing Technical Sub-Committee should continue to be held as frequently as practicable and necessary, but at least once during the period between sessions of the Plant Protection Committee.

VI. EXTENSION OF THE GEOGRAPHICAL SCOPE OF THE PLANT PROTECTION AGREEMENT

The Committee gave detailed consideration to the question of extension of the geographical scope of the Region. After studying the developments which had occurred in establishing regional agreements under the International Plant Protection Convention, it concluded that there were countries located outside of the Region engaged in considerable trade in agricultural commodities and plant materials with the countries within the Region as currently defined and which could not logically become members of any other regional plant protection organization. It also studied the replies to the note verbale of 30 April 1965, sent out by the Director-General of FAO in response to the recommendation of the Fifth Session.

The Committee decided that it should be made possible for countries in this geographic area to join the Agreement for the South East Asia and Pacific Region.

Difficulty was experienced in defining the Region to include territories like Japan, Republic of South Korea, Taiwan, Hong Kong, New Zealand, Hawaii and some other Pacific Islands, and therefore while recognizing that FAO legal experts will have to determine the final language to be used, the Committee offered the following suggested definition of the Region:

> "The South East Asia and Pacific Region, hereinafter called the Region, comprises all territories in South East Asia, east of the western border of Pakistan, and south of the Himalayas and the southern border of China together with all those territories in the Pacific Ocean, the South China Sea and the Indian Ocean situated wholely or partly in the area bounded by longitudes 100° E and 130° W and latitudes 40° N and 45° S."

The Committee, therefore, recommended to FAO that steps immediately be initiated to amend the definition of the Region in accordance with the above suggestion.

VII. CONSIDERATION OF APPENDIX A OF THE AGREEMENT

The Committee examined Appendix A of the Agreement containing the list of destructive pests and diseases not yet established in the Region, and amended by the First, Second, Third and Sixth meetings. Certain highly destructive pests and diseases of limited distribution in the Region have also been added.

The revised list is given here as Appendix II.

VIII. MEASURES FOR REGULATING IMPORTATION AND MOVEMENT OF PLANTS

The Committee reviewed in detail its previous recommendations on measures for regulating the importation and movement of plants.

The Committee decided that no alterations were necessary for the following crops:

Banana, abaca and other Musa spp.
Coffee
Cotton
Groundnut
Maize
Pineapple
Potatoes
Soil and Rooted Plants
Sugarcane
Sweet Potatoes
Taro
Tea
Tobacco

However, in the light of new information and experience available since the last meeting, the Committee considered it necessary to amend some of its previous recommendations for citrus, cocoa, coconut, oil palm, rice and rubber, and suggested measures for bread-fruit, forest trees, fruits and vegetables and ornamentals.

Modifications or additions are listed below.

A. BREADFRUIT

The Committee took note of a serious disease of breadfruit (Artocarpus communis and A. mariannensis) called "Pingalap" which has been reported as occurring in Guam, Pingalap Atoll, Truk, Ponape, Pingalap Islet, Kili Island, Namorik Atoll, Saipan (U.S. Trust Territory), Gilbert and Ellice Islands and American Samoa in the Pacific Region and recognized it as a most serious threat to a staple food of the people in the Islands. Since the cause of the disease has not yet been determined, the Committee recommended:

(a) that FAO initiate a broad program of research and assist in any way possible to determine the cause of the disease and means for its control;

(b) in the meantime member governments should prohibit the importation of all planting materials of Artocarpus spp. from areas where Pingalap is known to occur.

B. CITRUS

Since the last Meeting of the Committee there have been additional reports of serious virus diseases in the Region. Xyloporosis and exocortis have been found to be present in the Philippines and phloem degeneration virus in Indonesia. The virus disease situation in other member countries will probably be clearer when more surveys and tests have been carried out.

Recognizing that it is virtually impossible at this time to obtain citrus plants from any country where the phytosanitary services will confidently state that the material has been indexed for all known viruses and found free from all of them, the Committee recommended that importation of citrus planting materials should be by means of seeds. Citrus seeds are believed not to carry virus diseases. Most citrus species produce nucellar seedlings which conform closely to the parent trees.

C. COCOA

The Committee recommended that each contracting government should prohibit the importation into its territory or territories of any planting material of Theobroma spp. unless:

(a) the importation is made for scientific purpose;

(b) written permission has been granted for each consignment of plants by the Competent Authority of the importing territory or territories and the importation is in accordance with such special conditions as may be imposed by the Competent Authority in granting such permission;

(c) the plants have been treated in the country of origin in a manner acceptable to the Competent Authority of the importing territory and have been examined by a qualified specialist and certified free from pests and diseases, and each consignment of plants is accompanied or covered by certificate signed by an appropriate authority in the country of origin, to the effect that the above requirements have been fulfilled.

Each contracting government should prohibit the importation into its territory or territories of any vegetative propagating material of Theobroma and any other plant found to be a host for the swollen shoot virus complex or other viruses of Theobroma from all areas where these viruses are known to be present. Such other plants (known up to April 1967) are other members of the family Sterculiaceae and members of the family Bombacaceae. The known distribution of the swollen shoot virus complex is West Africa and Ceylon. Other virus diseases have been recorded in the West Indies.

It is recommended that countries in the Region be permitted to import seeds, the testas of which have been removed, from countries where the swollen shoot virus complex is known to occur without itermediate quarantine outside the area in which swollen shoot disease occurs, provided that:

(a) consignments are small and importation is made for scientific purposes;

(b) importation is made under the responsibility of the Department of Agriculture of the importing country;

(c) the phytosanitary certificate which accompanies each consignment states that the seeds were collected from the pods of apparently healthy trees;

(d) there is efficient postentry quarantine.

From countries where the virus complex causing swollen shoot disease of Theobroma is not known to be present, each contracting government should prohibit the importation of vegetative propagating material of Theobroma into its territory or territories unless in addition to the requirements given under C. COCOA: (1) such propagating material is grown at a place where cocoa is not grown commercially, which is approved by the Competent Authority of the importing country and which is outside any country where virus diseases of Theobroma are reported to be present; (2) such propagating material has been grown for an adequate period at a plant quarantine station; and (3) each consignment of propagating material is accompanied by a certificate signed by the officer in charge of the quarantine station to the effect that the above requirements have been fulfilled. The movement of cocoa propagating material between those territories within the Region where none of the above-mentioned diseases are present is exempted from this restriction.

Vegetative material should always be moved as budwood or as unrooted cuttings; never as rooted cuttings.

Pollen cannot be considered an entirely safe material for distribution unless it has been collected in areas known to be free from the major cocoa diseases.

Because of the occurrence of cushion gall in some parts of the Region, and pending determination of the cause, strictest precautions should taken in the movement of propagating material from areas where this disease occurs.

D. COCONUT

Resolution No. 7 of the First Meeting of the FAO Technical Working Party on Coconut Production, Protection and Processing held in December 1961, concerns quarantine precautions for the import of coconut propagating materials. This resolution amplifies the Committee's former recommendation on this matter and should, therefore, be adopted as follows:

(a) No introductions should be made from areas where the following diseases or other diseases of obscure origin are known to occur:

Disease	Known Distribution
Red ring (*Aphelenchoides cocophilus*)	Caribbean area
Lethal yellowing	Jamaica, Haiti, Florida
Kaincopé disease	Ghana, Togoland
Cadang-cadang	Philippines
Bronze leaf wilt	Guyana, West Indies
Root (wilt) disease	South India
Guam coconut disease (previously reported as cadang-cadang)	Guam
Coconut wilt	Malaysia
Leaf scorch disease	Ceylon

(b) The above or similar diseases may also occur in other areas. Therefore in these other areas, the following precautions should be taken:

(i) Importation of coconut materials should be made only by official services, under permit, and only in small quantities, restricted to unsprouted nuts from which the perianth has been removed, which have been obtained from a known disease-free area.

(ii) The seednuts should be accompanied by a certificate from an appropriate authority in the country of origin which states that the seeds come from trees showing no signs of disease.

(iii) Upon arrival, the seednuts should be fumigated and treated by any method considered appropriate by the competent authorities of the importing country.

(iv) The imported seednuts should be planted in individual containers in isolated quarantine for a period of at least three months after visible germination. Any diseased seedlings, together with containers and planting medium, should be burnt or effectively sterilized.

E. FOREST TREES

The Committee considered that important diseases and pests of forest trees might be introduced into countries in the Region where at present they do not exist and recommended that importation of forest propagating material should generally be limited to seed. Where vegetative propagating material is required, it should only be introduced under strict postentry quarantine. In the meantime, more information on important diseases and pests of forest trees should be sought from member governments.

F. FRUITS AND VEGETABLES

The Committee endorsed the recommendation of the Fifth Meeting and recommended that more information on the distribution of diseases and pests and the risks involved in the importation of fruits and vegetables for consumption be secured.

G. OIL PALM

The introduction of seedlings from outside and within the Region should be strictly prohibited.

Regarding seed from Africa or America, only small quantities should be imported and these should be introduced only by official services. Seed should be treated in the country of origin with an appropriate fungicide, and so certified in the accompanying phytosanitary certificate.

Because it is known that certain pests and diseases may be carried with pollen of some other plants and in view of the importance of importing oil palm pollen for breeding purposes, it was recommended that member governments take appropariate precautions when importing pollen.

H. ORNAMENTALS

The Committee considered that information on orchid diseases within the Region is inadequate and that further information should be sought. The Committee recommended that, in the meantime, importation of orchid plants should be restricted to small quantities from reliable sources free of all planting media.

The Committee recognized that the quarantine risks associated with the importation of orchid seedlings raised in sterile flasks are negligible and, therefore, urged member countries to encourage this method of importation.

I. RICE

Special attention was drawn to the dangers associated with distribution of rice seed for planting, because diseases such as blast, white tip, bacterial leaf blight and brown spot are seed-borne. In addition, physiologic strains of blast and some other disease organisms differ in various localities. The Committee recommended to all importing authorities that seed should be imported for scientific purposes and proper quarantine precautions should be carried out on all imported rice seed regardless of its origin. In particular, all such seed should be given hot water treatment and planted in quarantine for expert observation before release.

The Committee drew attention to the risks of spreading insects, particularly stem borers, and diseases by means of rice straw, but recognized that there are practical difficulties in treating and/or restricting its use. It was felt that the contracting governments themselves should determine the course of action necessary to offset these risks.

J. RUBBER

The Committee noted that under clause 7 of Appendix B of the Agreement, the Competent Authority is required to ".... ensure that such plant or plants are grown for such period as will ensure that such plant or plants are free from all pests and diseases before they are released."

To achieve this, the Committee recommended that *Hevea* plants should be grown in isolation in a quarantine house under the control of a qualified specialist authorized by the Competent Authority.

IX. SPECIAL PLANT PEST AND DISEASE PROBLEMS WITHIN THE REGION

1. Insect Pests and Diseases of Rice

The Committee took note of the research work on control of pests of rice being carried out in the member countries and recognized that various pesticides had been found to be effective, particularly against rice stem borers and leafhoppers. However, chemical control measures had not been adopted on a large scale by farmers. The need for large scale pest and disease control program is apparent. Some of the most important rice pests of the Region are species of stem borers, leafhoppers and the gall-midge (Pachydiplosis oryzae). The leafhoppers are of great importance because they add to the damage by transmitting virus diseases.

Several virus diseases occur in most countries of the Region and some are spreading e.g., orange leaf, tungro, grassy stunt and dwarf in the Philippines, orange leaf and tungro in Thailand, Penyakit Merah in Malaysia, Mentek in Indonesia and rice yellowing, yellow dwarf and grassy stunt in India. Evidence indicates similarities between Mentek of Indonesia, tungro of the Philippines and Thailand, and Penyakit Merah of Malaysia, but no accurate means of identification are available for these diseases and their etiologic agents.

The Committee took note of the proposed symposium on the virus diseases of rice, to be held at the International Rice Research Institute in the Philippines in April 1967, and looked forward to its recommendations.

Rice pests, together with diseases, take a heavy toll of the rice crop. Damage caused directly by nematodes, rats, birds and crabs further reduces the yield.

Resistant varieties are being studied and developed and the research on crop protection methods is being intensified.

As research program on rice are being conducted by various countries within the Region and there are frequent exchanges of seed of different varieties within the Region, the Committee emphasized its earlier recommendation that rice seed should be exchanged only in small quantities necessary for research, and that bulk quantities for sowing purposes should not be imported.

2. Plant Parasitic Nematodes

The Committee took note of the additional species of plant parasitic nematodes and research on nematodes reported from various member countries in recent years, and emphasized the need for detailed studies on plant parasitic nematodes. It requested FAO to implement the 6th Recommendation of the Fifth Meeting and also to explore the possibility of assigning a plant nematologist to undertake a survey of plant parasitic nematodes. In countries where nematologists are needed, technical assistance under the UNDP(TA) and other programs should be sought, particularly with regard to fellowships. A regional training center on nematology should also be established in the Region.

3. Noxious Weeds and their Control

The Committee noted that chemical control was effective for some of the most important noxious weeds in the Region such as Lalang (Imperata cylindrica), water-hyacinth (Eichornia crassipes) and Pennisetum spp., particularly P. pedicillatum and P. polystachyon, which have been accidently introduced from one country in the Region to another as seed contaminants.

The Committee emphasized that as weeds are becoming an increasingly serious handicap to agricultural production and as rapid developments have taken place in weed control methods, early action should be taken to circulate lists of weeds important in the Region and to give up-to-date information on methods of control. Possibilities of initiating large scale projects for control of important weeds of wide distribution in the Region should be explored.

4. Control of Rodents

The Committee recognized the major role played by the different species of rodents reported from various member countries in destroying grain in fields and stores, and the great importance of anti-rodent campaigns. The relative importance of reducing the main population by poison baiting with acute poisons like zinc phosphide and sodium fluoro-acetate and the residual population by anti-coagulants (like warfarin), particularly formulated with paraffin wax, was brought out. In certain areas HCN and aluminium phosphide fumigation had given good results in eliminating the residual populations. However, great care should be taken in handling and using these highly toxic poisons.

Bait shyness can be avoided by pre-baiting and changing the bait material as well as the rodenticide from time to time and by interposition of fairly long intervals between campaigns. The Committee further noted that the results of baiting with norbromide had been rather inconsistent with different species of rats in various member countries.

The Committee recommended that the FAO assist member countries in securing the required quantities of rodenticide for organizing large scale anti-rodent campaigns under the Freedom From Hunger Campaign or other suitable programs.

X. SPECIAL PROBLEMS IN PLANT QUARANTINE

1. Inspection and Treatment of Aircraft and Vessels

The Committee noted the recommendation of the Technical Sub-Committee that minimum aircraft treatment and inspection procedures be specified for all airports of entry in the Region.

Recognizing that the ever increasing movement of plant material by aircraft must greatly increase the risk of introducing serious diseases and pests into the Region, the Committee endorsed the recommendations of the Fifth Session as the minimum treatment and inspection procedures for aircraft arriving at airports within the Region:

(a) Treatment with a light-knock-down spray immediately on arrival of the aircraft and prior to the disembarkation of passengers and crew.

(b) Thorough spray following the disembarkation of passengers and crew.

(c) Treatment of the cargo and luggage compartments, wheel bays, nacelles, etc., concurrently with the treatment of the main compartment.

(d) Incineration of all air-craft garbage.

(e) Inspection of cargo and passenger baggage.

The Committee recognized the risks of introducing pests and diseases through plants and plant materials carried by vessels and suggested that ships' store-rooms, refrigerators, passenger and crew decks, cargo, and baggage of passengers and crew, as well as ships' dunnage, require quarantine attention. Ship's garbage should be incinerated.

2. Inspection and Treatment of Plants and Plant Products

The objective is to ensure that the imported plants and plant products do not introduce any pests or diseases into the importing country. Its effectiveness depends directly upon the inspectional method in use, the manner in which it is carried out and the treatment employed when necessary.

Methods of inspection and treatment differ from country to country because these are dependent upon the plant species, propagating material being introduced, origin, and the kind of disease or pest risk involved. The Committee felt that important regional crops which are covered under regulatory measures should be carefully examined, particularly with a view to detecting the dangerous diseases and pests specified. With other plants and plant products a sampling technique can be employed and this will depend on the factors mentioned above and the facilities available.

Quarantine treatments are specialized treatments because the treatments prescribed must be 100 per cent effective. The quarantine treatments and procedures for banana, cotton, groundnut, maize, potato, rice, rubber, sugarcane and tobacco as practised in some countries have been summarized in Information Letter No. 43. These may be used as a guide by the member countries. As information on the treatments and procedures for other crops becomes available, the Technical Secretary will circulate them to member countries.

3. Postentry Plant Quarantine Stations

Because some diseases and pests are difficult, if not impossible, to treat or detect on vegetative material, the Committee again stressed that postentry quarantine stations are essential for the safe importation of plant propagating material. The Committee noted that certain countries within the Region have, or are providing, postentry quarantine services.

The Committee took note of the proposal by the Republic of Philippines to set up a postentry quarantine and training station at Manila, which may also serve the Region. Countries where postentry quarantine facilities are not available may wish to use the services expected to be provided by this station.

It was pointed out that a regional postentry quarantine station may have disadvantages in that diseases and pests common in the location of the station may be introduced to the importing country when planting material is transferred after release from quarantine at the regional station.

4. Public Relations and Informative Programs

The question of plant quarantine publicity was re-examined by the Committee on both a national and regional level and the following points were stressed:

(a) Press, radio, television, films, filmstrips and posters should be used regularly and more frequently.

(b) Information concerning quarantine restrictions should be written in a concise and popular way.

(c) Publicity material should dramatize the economic risks in terms of possible monetary losses which could result from the introduction of a pest or disease.

(d) Publicity material should be widely distributed.

(e) For an informative program to succeed, it must be handled by skilled personnel and adequate funds must be provided.

(f) In some countries where publicity facilities already exist, plant quarantine services should utilize these facilities.

(g) Plant quarantine does gain some subtle publicity through the adoption of a distinctive uniform for plant quarantine staff.

The matter of a regional poster had been investigated by the Technical Secretary as requested by the Fifth Session. It was found that certain difficulties in the production of a regional poster were evident. Therefore the Committee recommended that quarantine posters, prepared by individual countries to meet their specific needs, could be a more effective publicity medium than a regional poster.

XI. TRAINING AND INVESTIGATION

1. Research, Training and Extension

In view of the urgent need to increase food production to feed the rapidly increasing population in many countries in the Region, research, training and extension projects in plant protection should receive prompt consideration. Insect pests, plant diseases, nematodes, weeds and rodents are responsible for enormous losses of food supplies which otherwise could be used for human consumption.

Recognizing the need for co-operative effort in ensuring higher production, the Committee endorsed the FAO proposal for intensification of research, training and extension in plant protection in the Region.

The Committee recommended that national Plant Protection Research and Training Centres should be established and should be supported by UNDP(SF)in countries which are ready to receive assistance.

The Committee further recommended that FAO continue to provide assistance in organizing regional training in plant protection and plant quarantine at established centers in some member countries in the Region and institute projects of operational research and large scale demonstrations in crop pest and disease control.

The Committee viewed with concern the lack of any large scale biological control projects in the Region and recommended that FAO initiate action for organizing a few pilot projects for the control of pests such as the giant African snail and some major weeds.

The Committee considered the establishment of specialized laboratories for determining pesticide residues on food crops and associated problems as an immediate necessity and recommended that FAO should assist in initiating a Project under UNDP(SF) or other program for creating such facilities in the Region.

2. Plant Quarantine Course in Australia

The Committee recorded its appreciation to the Australian Freedom From Hunger Campaign Committee and the Australian Government for providing a Plant Quarantine Course in 1966.

Member countries indicated their desire for another course, similar to the one conducted in Australia in 1966, to be arranged for 1967 or 1968 in the Region. The Committee would like to see this proposed course again organized in Australia.

The Committee also suggested that FAO should explore the possibilities of organizing training courses at national and regional levels and should provide assistance in organizing such courses.

The Committee urged the member governments to pay special attention to training programs in plant protection and plant quarantine.

XII. LOSSES CAUSED BY PLANT PESTS AND DISEASES WITHIN THE REGION

The Committee took note of the various estimates of losses caused by insect pests and plant diseases made available by member countries. While appreciating that losses were at times serious, it considered that most estimates were not based on scientifically-planned studies. It is expected that this important matter of obtaining reliable estimates will be considered at the FAO Symposium on Crop Losses in October 1967. It is hoped that suitable statistical techniques will be developed or recommended during the Symposium in order that such studies may be initiated.

XIII. PROGRAM OF THE COMMITTEE

1. Program

The Committee carefully considered the work to be planned for the next two years. It was concluded that the fundamental objective of the Committee remained the same, i.e., to give the best advice to governments on how the objectives of the Agreement might be achieved.

The following program, incorporating and continuing activities proposed at the Fifth Session, and including some suggested at the Sixth Session is proposed. The Technical Secretary will implement these proposals which are as follows:

(a) Maintenance of an information service by means of quarterly newsletter, information letters and technical documents containing information on such items as new records and major outbreaks of pests and diseases in the Region, changes in plant quarantine legislation in territories in the Region, new developments in control practices, and results of research work on pests and diseases of important crops in the Region.

(b) Visits to individual territories upon request to give assistance, to enquire into certain aspects of diseases or pests of any major crop in the area and to develop and maintain contacts with personnel concerned with plant protection operations and research.

(c) Continuation, collation and distribution of a list of major weeds in the Region, with notes on their occurrence and control.

(d) Continuation of revision of lists of plant diseases and pests affecting crops in the Region.

(e) Assembling and preparing abstracts from available technical reports and reprints for filing and for circulation to interested personnel.

(f) Gathering and circulating information about such matters as treatment facilities and equipment, postentry quarantine procedures and requirements, the possibilities of biological control of any pest or weed, aircraft treatments.

(g) Attending special meetings on plant quarantine or plant protection which directly affect the work of the Committee.

(h) Assisting the contracting governments in planning and organizing training programs in plant protection and plant quarantine.

(i) Advising and assisting the member countries in planning, preparation and implementation of programs and projects on research, development and extension in plant protection.

(j) Coordinating the plant protection and plant quarantine activities and projects being operated in the Region with the Assistance of FAO, UNDP and other similar agencies.

The Committee considered that the Standing Technical Sub-Committee has proved valuable and should continue. It should meet at least once between meetings to review and, if necessary, modify the activities of the Committee.

2. Officers

It was unanimously agreed that the Sub-Committee should consist of:

Dr. Kahn Jalavicharana (Thailand) - Chairman
Dr. Sardar Singh (India)
Mr. J.R.G. Morschel (Australia)
Mr. S.J. Navaratnam (Malaysia)

The Technical Secretary would continue to act as Secretary and Convenor of the Sub-Committee. It was agreed that the Sub-Committee should have power to co-opt.

3. Next Session

The Committee agreed that the next session of the Committee should be held within the next two years at a time and place to be arranged by FAO.

XIV. GENERAL RECOMMENDATIONS

1. Extension of Region

The Committee,

Recognizing the great benefits to plant protection within the Region which have followed co-operative action under the Agreement;

Believing that there are some territories within the geographical area as defined in the proposed extension of the geographical scope of the Region that are at present unable to join the Agreement whose participation would strengthen the overall collective security;

Considering the replies from countries in the Region in response to the Director-General's note verbale of 4 April 1965 on this subject;

Recommends unanimously that FAO take immediate steps to extend the geographical scope of the Agreement and to define the Region to express the intention given in the following tentative definition:

> "The South East Asia and Pacific Region, hereinafter called the Region, comprises all territories in South East Asia, east of the western border of Pakistan, and south of the Himalayas and the southern border of China together with all those territories in the Pacific Ocean, the South China Sea and the Indian Ocean situated wholly or partly in the area bounded by longitudes 100° E and 130° W and latitudes 40° N and 45° S."

2. Implementation of the Agreement

The Committee,

Reviewing the progress made in countries in the Region in developing plant protection services to implement the Agreement;

Considering that in some countries the plant quarantine services are not yet adequately developed;

Realizing that inadequate plant protection precautions in one country in the Region exposes not only that country but the whole Region to the danger of introducing serious diseases and pests of plants;

Requests FAO to urge each member country to strengthen its plant quarantine services by increased legislative powers, staff and facilities to make it possible to fulfil its obligations under the Agreement.

3. Staff

The Committee,

Reviewing progress made in the implementation of the program outlined at its Fifth Session;

Considering that the volume of work in the overall program of gathering and circulating information on diseases, pests and weeds had greatly increased with expanding activities in many countries in the Region, and also with the growing appreciation of the value of the service;

Affirmes the recommendation made at the Fifth Session that an associate expert be appointed to assist the Technical Secretary to carry out the program of the Committee.

4. Intensification of Research, Training and Demonstration in Plant Protection in South East Asia and the Pacific

The Committee,

Having examined the proposal made by FAO for the establishment of a network of national centers throughout the Region for research, training and demonstration dealing with plant protection;

Considering that the proposed network of plant protection centers could increase the level of food production in the Region by reducing avoidable losses;

Recognizing that co-ordination of effort in this field throughout the Region is essential for the economic use of available funds;

Recommends that member governments be requested to initiate action programs in research, training and demonstration in plant protection and when appropriate, seek assistance from FAO, UNDP and other agencies; and

Requests FAO to support such action programs when received.

5. Training Courses

The Committee,

Aware of the great importance of having staff engaged in plant quarantine adequately trained in principles, methods and techniques;

Considering that training should be provided at more than one level because of the various responsibilities of the quarantine personnel and that there is need for training on both regional and national levels;

Agreed that FAO should explore the possibilities of organizing training courses at national and regional levels and that another course similar to the one conducted in Australia in 1966 should be conducted in 1967 or 1968, preferably in Australia;

Recommends to member governments that if they are unable to organize their own national training courses they might pay special attention to training programs elsewhere.

APPENDIX 1

AGENDA

1. Opening of the Session

2. Election of Chairman

3. Adoption of Agenda

4. Designation of ad hoc Sub-Committees

5. Present status of the Plant Protection Agreement for the South East Asia and Pacific Region

6. Accomplishments and future activities of the Committee - statement by Technical Secretary

7. Progress made by participating governments in the implementation of the Agreement and recommendations of the Committee - statements by Delegates.

8. Extension of the geographical scope of the Plant Protection Agreement for the South East Asia and Pacific Region

9. Destructive plant pests and diseases not yet established within the Region (review of and amendments to Appendix A of the Agreement).

10. Measures designed to prevent the introduction of plant pests and diseases from outside the region.

11. Special plant pest and disease problems in the Region

    (a) Insect pests and virus diseases of rice

    (b) Plant parasitic nematodes

    (c) Noxious weeds and their control

    (d) Control of rodents in the field

    (e) Others

12. Special problems in plant quarantine

    (a) Inspection and treatment of vessels and aircraft

    (b) Inspection and treatment of plants and plant products

    (c) Postentry plant quarantine stations; facilities available in contrast to current and future needs

    (d) Public relations and informative programs

13. Training courses

    (a) General plant protection

    (b) Plant quarantine

14. Losses caused by plant pests and diseases within the Region, present estimates and plans for determining losses in the future.

15. Program of work of the Committee

16. Other business

17. Adoption of Report

APPENDIX II

LIST OF DESTRUCTIVE PESTS AND DISEASES NOT YET ESTABLISHED IN THE SOUTH EAST ASIA AND PACIFIC REGION (APPENDIX A OF THE AGREEMENT), AS AMENDED BY THE FIRST, SECOND, THIRD AND SIXTH MEETINGS OF THE COMMITTEE

COCOA (*Theobroma cacao*)

		Known Distribution
Sahlbergella singularis Hagl.	Capsid bug causing die back	West Africa, Congo, Angola
Distantiella theobroma Dist.	Capsid bug causing die back	West Africa, Congo
Helopeltis bergrothi Reut.	Capsid bug causing canker	Africa
Stenoma decora Zell.	Cacao fruit and shoot borer	Brazil
Marasmius perniciosus Stahel	Witches' broom	West Indies, South America
Monilia roreri Cif.	Monilia pod rot	South America, Panama
Trachysphaera fructigena Tabor et Bunting	Trachysphaera pod rot	Africa
Swollen shoot virus complex	Swollen shoot	West Africa (certain strains occur in Ceylon; similar diseases probably also occur in Colombia, Venezuela and Java)
Cacao red mottle virus	Red mottle	Trinidad
Cacao vein-clearing virus	Vein clearing	Trinidad

CASSAVA (*Manihot esculenta*)

Phaeolus manihotis Heim	Root rot	Malagasy
Cassava brown streak virus	Brown streak	East Africa, Southern Rhodesia, Malawi
Cassava mosaic virus	Mosaic	Africa, Brazil, Indonesia

CITRUS (*Citrus* spp.)

Anastrepha fraterculus (Wied)		Mexico, Central and South America
Anastrepha ludens (Loew.)	Mexican fruit fly	Mexico, Central America
Anastrepha mombinpraeoptans Sein	West Indian fruit fly	U.S.A. (Florida, Texas) Mexico, Central America, South America, West Indies
Other *Anastrepha* spp.	Fruit flies	America (tropical and warm regions)
Ceratitis rosa Karsch	Natal fruit fly	Africa
Ceratitis capitata (Wied.)	Mediterranean fruit fly	Europe, Near East, Africa, W. Australia, Central and South America, Hawaii
Strumeta (Dacus) tryoni (Frogg)	Queensland fruit fly	Australia (Queensland and part of New South Wales)
Deuterophoma tracheiphila Petri	Mal secco	Mediterranean region
Citrus stubborn disease virus	Stubborn disease	California, Arizona

COCONUT (*Cocos nucifera*)

Pachymerus nucleorum (F.)	Cocoanut borer	Brazil, Guyana, Paraguay
Pseudotheraptus wagi Br.	Coreid bug	East Africa, Zanzibar
Rhynchophorus palmarum (Linn.)	Palm weevil	Central and South America, West Indies
Aphelenchoides cocophilus (Cobb) Goodey	Red ring disease	West Indies, Panama, Venezuela

COFFEE (*Coffea* spp.)

Antestiopsis spp.	Pentatomid bugs	Africa
Leucoptera coffeella (Guer.)	White coffee leaf miner	S. America, West Indies
Planococcus kenyae (Le Pelley)	Mealy bug	East and West Africa, Congo
Omphalia flavida Maubl. et Rangel	American leaf spot	Mexico, U.S.A., West Indies, Central and South America
Trachysphaera fructigena Tabor et Bunting	Trachysphaera fruit rot	Africa

Gibberella xylarioides (Stey.) Heim et Saccas	Tracheomycosis	Africa
Coffee blister spot virus	Blister spot	Costa Rica
Virus	Mancha mantecosa	Costa Rica
	COTTON (Gossypium spp.)	
Anthonomus grandis Boh.	Mexican cotton boll weevil	West Indies, Mexico, Central America, Venezuela, U.S.A.
Anthonomus vestitus Boh.	Peruvian cotton boll weevil	Peru
Anthonomus spp.	Boll weevils	New World
Phymatotrichum omnivorum (Shear) Duggar	Texas root rot	Mexico, U.S.A.
Sacadodes pyralis Dyar	False pink bollworm	Trinidad, Guyana, Venezuela, Colombia, Costa Rica, Panama, Nicaragua
Cotton leaf curl virus	Leaf curl	Africa
	HEVEA RUBBER (Hevea brasiliensis)	
Leptopharsa heveae Drake et Poor	Lace bug	Tropical America, Brazil
Dothidella ulei P. Henn.	South American leaf blight	Mexico, Central America, West Indies, South America
Pellicularia filamentosa (Pat.) Rogers	Target leaf spot	Central and South America
	MAIZE (Zea mays)	
Diatraea spp. esp. D. saccharalis (F.)	Stalk borers	Southern U.S.A., Mexico, West Indies, Central America, South America (certain species occur in the Region)
Sesamia cretica Led.	Durra stem borer	Africa, Mediterranean region
Xanthomonas stewartii (E.F. Smith) Dowson	Bacterial wilt	Canada, Mexico, Puerto Rico, U.S.A., Italy, U.S.S.R.
	OIL PALM (Elaeis guineensis)	
Pachymerus lacordae (Chevr.)	Kernel borer	West Africa
Pachymerus nucleorum (F.)	Kernel borer	Brasil, Guyana, Paraguay

Pimelephila ghesquierii Tams.	A pyralid	West Africa, Congo
Fusarium oxysporum Schlect.	Fusarium wilt	West Africa
Cercospora elaeidis Stey.	Freckle	West Africa, French Equatorial Africa, Congo

PAPAYA (*Carica papaya*)

Papaya bunchy top virus	Bunchy top	U.S.A., West Indies, Ceylon, Tanganyika, India, Sudan
Papaya mosaic virus	Papaya mosaic dieback	Tanganyika
Papaya ring spot virus	Papaya ring spot	Hawaii
Virus	Papaya Waialua disease	Hawaii

POTATO (*Solanum tuberosum*)

Leptinotarsa decemlineata Say.	Colorado beetle	North America, Europe
Corynebacterium sepedonicum (Spieck. et Kotth.) Skapt et Burk.	Bacterial ring rot	North America, Costa Rica, Venezuela, Europe, India
Synchytrium endobioticum (Schilb) Perc.	Black wart	South Africa, Europe, North America, South America, Japan, India (West Bengal)
Heterodera rostochiensis Wr.	Golden nematode	Europe, U.S.A. (Long Island), Algeria, Israel, New Zealand
Oospora pustulans Owen et Wakef.	Skin spot	Canada, Australia, Norway, United Kingdom, Ireland, New Zealand

RICE (*Oryza sativa*)

Diatraea spp.	Stem or stalk borers	Southern U.S.A., Mexico, West Indies, Central America, South America
Ephelis pallida Pat.	Panicle disease	West Africa
Rice dwarf virus	Dwarf	Japan, the Philippines
Rice stripe virus	Stripe	Japan
Rice hoja blanca virus	White leaf (Hoja blanca)	West Indies, Central America, South America, U.S.A.

SUGAR CANE (*Saccharum* spp.)

Diatraea spp., esp. *D. saccharalis* (F.)	Stalk borers	Southern U.S.A., Mexico, West Indies, Central America, South America (certain species occur in the Region)
Diaprepes abbreviatus L.	Sugar cane root-stalk borer weevil	West Indies
Xanthomonas albilineans (Ashby) Dow.	Leaf Scald	Malagasy, Mauritius, Taiwan, Reunion, Hawaii, Cambodia, Vietnam, Java, Philippines, Australia
Xanthomonas vasculorum (Cobb) Dow.	Gumming disease	Australia, South America, Mexico, West Indies, Reunion, Mauritius, Medeira, South Africa, Malagasy, Indonesia
Clemona smithi Arr.	White cane grub	Barbados, Trinidad, Mauritius
Sugar cane ratoon stunting virus	Ratoon stunting	Australia, Africa, Mexico, West Indies, Hawaii, Fiji, Central America, South America, U.S.A., Philippines, Taiwan

SWEET POTATO (*Ipomoea batatas*)

Euscepes postfasciatus (Fairm.)	West Indian sweet potato weevil	West Indies, Brazil, Fiji, Tonga.
Sweet potato internal cork virus	Internal cork	U.S.A.
Sweet potato mosaic virus	Mosaic	East Africa, Congo (reported to occur in Ceylon)
Sweet potato dwarf virus	Dwarf	Ryukuyu Islands

TEA (*Thea sinensis*)

Exobasidium reticulatum		Japan
Virus	Phloem necrosis virus	Ceylon

TOBACCO (*Nicotiana spp.*)

Ephestia elutella (Hbn.)	Tobacco moth	America, Congo, Mozambique, West Africa
Pseudomonas tabaci (Wolf et Foster) Stevens	Wildfire	North America, Venezuela, Africa, Europe, Japan, China, (Taiwan), Iran, Turkey

Peronospora tabacina Adam	Blue mold	Australia, North America, South America

TOMATO (Lycopersicum esculentum)

Tomato spotted wilt virus	Spotted wilt	Africa, Australia, New Zealand, Europe, South America, West Indies, North America, Hawaii, Papua-New Guinea

TUNG (Aleurites fordii)

Septobasidium aleuritidis Heim et Bour.	Branch canker	Madagascar
Virus	Tung rough bark	U.S.A.

MR/65451/10.67/E/1/275